

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 November 2004 (11.11.2004)

PCT

(10) International Publication Number
WO 2004/097790 A1

(51) International Patent Classification⁷: G10D 1/08

(21) International Application Number:
PCT/AU2004/000560

(22) International Filing Date: 30 April 2004 (30.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003902087 1 May 2003 (01.05.2003) AU

(71) Applicant (for all designated States except US): AUS-
TRALIAN NATIVE MUSICAL INSTRUMENTS PTY
LTD [AU/AU]; Factory 3, 7 Clare Street, Bayswater, VIC
3153 (AU).

(72) Inventor; and

(75) Inventor/Applicant (for US only): CLARK, Bradley,
Roy [AU/AU]; C/o Factory 3, 7 Clare Street, Bayswater,
VIC 3153 (AU).

(74) Agent: WATERMARK PATENT & TRADEMARK
ATTORNEYS; 290 Burwood Road, Hawthorn, VIC 3122
(AU).

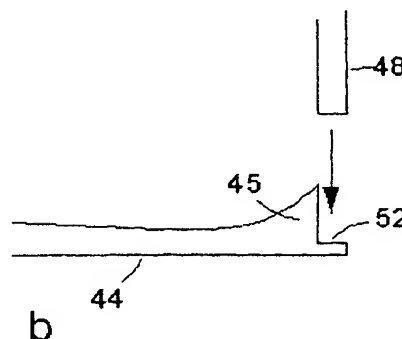
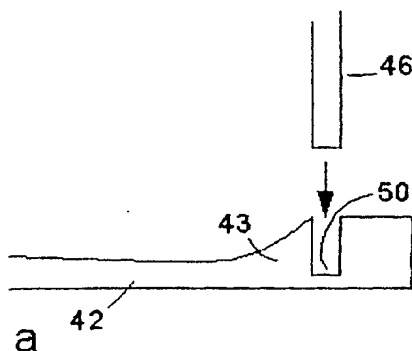
(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:
— with international search report

[Continued on next page]

(54) Title: ACOUSTIC GUITAR ASSEMBLY METHOD AND APPARATUS

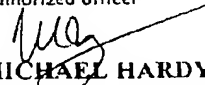


(57) Abstract: A musical instrument, such as an acoustic guitar, and methods and apparatus for assembly of such a musical instrument. The instrument includes at least one major panel, such as a front panel or soundboard, and a side wall. The major panel has a groove or rebate cut into the panel according to a predetermined pattern, which may extend substantially around the periphery of the panel. A first assembly jig is used to support the panel and a second assembly jig is used to hold the side wall in a configuration corresponding to the predetermined pattern of the groove or rebate. The side wall is placed into the second jig such that a free edge of the side wall substantially follows the predetermined pattern. Adhesive is applied and the jigs are brought together such that the free edge of the side wall is inserted into the groove or rebate. A compression force is applied across the jigs to urge the side wall into the groove or rebate. The first assembly jig may also be adapted to support a neck component of the instrument in a predetermined orientation relative to the panel to enable the neck component to be adhered to the panel and to the side wall in that precise orientation. A third assembly jig may then be used to assist in securing a second major panel, such as a back panel, to an edge of the side wall. Methods for accurately fabricating panels for musical instruments using a computer controlled routing machine, such as a CNC machine, are also disclosed. A superior instrument is thereby created in significantly less time than using conventional techniques.

WO 2004/097790 A1

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/000560

A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl. ⁷ : G10D 1/08		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) USPTO, DWPI, esp@cenet, CAPRI, Google: G10D 1/08, "no kerfing", guitar, sound()board, soundbox, groove, rebate, route* "cnc router"		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, A	WO-2004/031697-A1 (TAYLOR GUITARS) 15 April 2004 (15-04-04) See whole document	21-23
P, X	http://www.diy.net.com/diy/hb_musical_instruments/article/0,2023,DIY_13881_2850588,00.html (downloaded June 2004) See discussion of figure F.	23
X &L	http://www.trspartan.freemove.co.uk/acoustic_guitars.htm 13 April 2003 (13-04-03) http://web.archive.org/*/ http://www.trspartan.freemove.co.uk/acoustic_guitars.htm See drawing labelled "Constructional Details of Body"	9, 10, 11, 12, 21, 22
X	US-3722345-A (DOPERA) 27 March 1973 (27-03-73) See whole document.	9, 10, 11, 12, 22, 27, 28
X	US-2743644-A (ROSENHEIM) 1 May 1956 (01-05-56) See items 41 and 42 in figures 2 and 3.	9, 10, 11, 12, 22, 27, 28
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 21 June 2004		Date of mailing of the international search report 02 JUL 2004
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 260, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929		Authorized officer  MICHAEL HARDY Telephone No: (02) 6283 2547

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000560

C. (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US-2649827-A (MACCAFERRI) 25 August 1953 (25-08-53) See items 20 and 21 in figures 2 and 3.	9, 10, 11, 12, 22, 27, 28
X	GB-360401-A (KAWAJI) 2 May 1930 (02-05-30) See figure 3.	9, 10, 21, 22

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/000560

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Claims 1 to 16, 21, 22 and 24 to 28 are all characterised by a musical instrument having a panel with a groove or rebate for receiving a side wall of the instrument. Claims 17 to 20 are concerned with an assembly jig for a musical instrument which positively positions a neck component with a panel of the instrument during assembly. Claim 23 concerns a method of making a panel that is thicker at its edges than its centre. There is no mention of a groove or rebate in claims 17 to 20 or 23. There is therefore no special technical feature linking claims 17 to 20 or 23 with the remaining claims. Unity of invention is thus lacking.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2004/000560

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
WO	2004/031697				
US	3722345				
US	2743644				
US	2649827	US	2597154	US	2614448
				US	2664022
GB	360401				
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.					
END OF ANNEX					